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SURGERY OF THE URBAN BANTU

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The basis of this survey of the surgery, more particularly the operative surgery, of the urban Bantu is the surgical material admitted to the Coronation Hospital over a period of three years. All admissions shared by three medical, two surgical, a gynaecological and, more recently, an orthopaedic unit numbered 31,692 during the period under review. A total of 3,387 major operations were performed during this period. For detailed comment I have drawn on 7,162 admissions to my own unit, on the operative work performed by successive registrars, and a personal series of 560 major operations.

Our patients are drawn from the Native townships in and around Johannesburg. Many have been born and reared in an urban environment. They are not mine employees, and only a small number are compound dwellers.

As might be expected, trauma, tuberculosis and syphilis account for the bulk of surgical admissions. Of operative work, trauma accounts for 40% of major surgery, and emergency work of a non-traumatic nature another 13%. Of the remaining 47%, on my own unit, herniae generally accounted for 10%. The rest of our surgery covers a wide field embracing most of the specialities with no one particular type of case cropping up at all frequently. As yet, the urban Bantu continues to enjoy the relative immunity of the rural native to such commoner European maladies as peptic ulceration, thyrotoxicosis and appendicitis.

Interest in our so-called 'cold' surgery lies in the fact that when such conditions do occur they are often atypical in form, gross in their pathology and bizarre in their manifestations.

For the purpose of this paper I have elected to present some aspect of our traumatic material on one hand, and to mention on the other some of the gross uncommon pathologies of which the records of the hospital on the whole bear ample evidence.

TRAUMATIC SURGERY

(*a*) FRACTURES

Of all work both in- and out-patient, fractures occupy a prominent place. Despite the fact that only a small minority come to surgery; even these cases, mostly compound fractures of the long bones and the mandible, accounted for 20% of operative work on my own unit.

To our patients, for the most part unskilled workers, loss of function means complete loss of employment, and delayed return of function interim loss of earning power, if not actual loss of employment. For this reason full and rapid return of function becomes essential.

In securing this aim, however, one would like to stress, as has been stressed so often by reputable orthopaedic men, that there is no short cut. Since the war one has the impression that this short cut has been looked for by virtue of the anti-biotic era, the introduction of inert metal plates and such ingenious apparatus as the Roger-Anderson 'Fract-Sure' unit aiming at precision reduction and early movement.

We plate only when forced to do so. An exact reduction in itself is not always important, while a plate even in the abscence of infection tends to inhibit callus while lending little to the stability of the reduction in the absence of adequate immobilisation by more conservative means. My personal experience of the Roger-Anderson unit is that these appliances may precipitate delayed or non union and poor ultimate function, however gratifying the initial progress. The pins through the lower end of the femur violate a principle stressed by Watson-Jones (1940).

(*b*) HEAD INJURIES

At times these occupy 40% of our surgical beds. One would mention two aspects of this wide subject which have been of interest, namely early ambulation and exploratory craniotomy. We consistently practise early

ambulation from urgent necessity, and have had no real reason to regret the necessity.

Exploratory Craniotomy. We have made frequent use of inspection holes in the following types of patient:

a. Coma or stupor of unknown or doubtful origin.

b. Coma or stupor after a latent interval in recent head injuries.

c. Deepening or persistent coma after head injuries.

d. In conscious patients who develop neurological signs in association with evidence of increased intracranial pressure following apparent recovery from a head injury.

One admits the limitations of inspection holes made at the usual sites, particularly in cases of occipital extradural or intra-cortical haematoma. Localising signs do not necessarily point to the site of the lesion, and ventriculography (Rowbotham 1945) may become necessary.

However, exploratory craniotomy under local anaesthesia carries very little risk, and although one draws a blank in many cases, in others the results are spectacular and lifesaving. Of 25 such personal explorations, in eight one found a sub-dural (bilateral in two cases); in one an extra-dural haematoma; in another a severe degree of external hydrocephalus following a fractured base with subarachnoid haemorrhage; while in the last ase a large intra-cortical clot burst through the cortex when local pressure was relieved by an overlying trephine hole. On comparing the clinical records one finds no pattern which in itself could have indicated that eleven cases should have been explored and the others not.

The following cases are illustrative:

Case (I): Coma of Unknown Origin. This patient P.M. when referred to us was in coma, with normal pupils, a left sided hemiplegia, a spastic right arm; and a clear C.S.F. with a pressure of 250 and a normal chemistry. His previous history was that five weeks previously he had developed a left hemiplegia followed by persistent headache. When admitted to a medical ward on 30 September 1948 he had a left hemiplegia, normal pupils, no retinal changes, a clear C.S.F. with a pressure of 110 and containing a few red cells. There was no evidence of cardio-vascular or nephritic disease. He denied any head injury. Between the time of entry and surgery on the 15 October 1948 he became confused, and coma followed the development of a spastic right arm.

At operation a large chronic sub-dural cyst was removed *in toto* from his right temporo-parietal region. Full recovery.

Case (II): Stupor of Doubtful Origin. Patient B.B. was admitted to a medical ward on 27 October 1946 complaining of headache of one day's duration. He had a P.U.O. associated at first with some neck rigidity, and pneumonic changes in his left lung. His C.S.F. pressure was raised. The only neurological finding was an upgoing left big toe. He was investigated as a typhoid, but when an X-ray showed a linear fracture of his skull, he admitted to a head injury months before. At operation a right-sided chronic sub-dural haematoma was found. Full recovery.

Case (III): Deepening Coma after Injury. Patient P.N. admitted on 14 October 1946 in coma, with stertorous breathing, a dilated and fixed left pupil with all four limbs spastic, and a bilateral Babinski. He had evidence of local injury to the right side of his head. According to his relatives coma had deepened since its onset. A massive left-sided sub-dural haemorrhage was disclosed at operation. This patient died.

Case (IV): Coma after a Latent Period. Patient J.D. admitted on 31 March 1946 after a head injury. He was in coma with a dilated and fixed right pupil. All his limbs were flaccid. He had a laceration over his left occipito-parietal region. No permission for surgery was obtained. Lumbar puncture showed a blood-stained fluid with a pressure of 180. On conservative treatment this patient recovered, but was retained because of persistent headache. On the 15 April 1946 a house-surgeon found him in coma. At operation he had a large right-sided sub-dural haematoma. He recovered after drainage for 48 hours.

Case (V): Development of Neurological Signs after a Latent Period. Patient S.E. admitted to a medical ward on 26 April 1949 complaining of persistent headache and poor vision following a fall on his head three months previously. Apart from bilateral choked discs and a clear C.S.F. with a normal chemistry but a pressure of 400, he had no other clinical findings. X-ray of skull was normal. We were asked to do a ventriculography, and when this was attempted, a bilateral sub-dural haematoma was accidentally tapped via the ventriculography holes, and drained further by a hole made over each parietal eminence. Recovery followed.

In so far as the surgery of the urban native contains such a high proportion of blunt head injuries, one feels comment on the problem of intra-cranial haemorrhage is more than relevant in this paper.

(c) PENETRATING WOUNDS OF THE CHEST

A common social disability amongst our clients. The majority are relatively innocuous. The type that comes most often to surgery is the massive haemo-pneumothorax, many of whom have a subsequent total decortication. I have made it a practice to decorticate all the clotted haemothoraces I have opened and results justify the procedure. Following the view taken by Samson and Burford (1947) we do the uninfected cases in three to four weeks and the infected cases sooner. Toxaemia, anaemia, and increasing effusion despite aspiration are more important signs of infection than recovering organisms from aspirated fluid which may be sterile on culture. The following case illustrates this point:

Case. Patient S.N. admitted on 20 November 1948 following a stab in the left chest. He was transfused, and, when the risk of renewed bleeding was over, aspiration was commenced. Despite the removal of 3,000 cc. of fluid, the administration of both systemic and local penicillin and a further blood transfusion, by the 27 November 1948 his condition was worse. He had a well-developed pyrexia, a fast pulse, and was again anaemic, with a collapsed lung and as much fluid as when aspiration was commenced. No organisms were cultivated from aspirated fluid. On 3 December 1948 after another transfusion he was operated on. Despite the early intervention a well-marked and easily removed membrane

covered his visceral pleura. After surgery he improved at once. His pyrexia settled in a few days, his blood picture stabilised, and his pulse rate came down.

(*d*) ABDOMINAL TRAUMA

Penetrating and gun-shot wounds are common. Chicago of the bad old days—'The Roaring Twenties'—could not have had much on the casual slaughter which occurs in Johannesburg and its environs. Our cases are treated on standard lines. However, ingenuity is shown in the *modus operandi* of the anti-socialite. Current Sophiatown fashion recommends a bicycle spoke as a most effective means of producing the maximum number of enteric perforations with a minimum expenditure of physical effort. This same instrument in two cases severely damaged the cord when inserted between two lower thoracic vertebral bodies.

(*e*) HUMAN BITES

Bites of the hand are frequent. We have not, however, had a proved actinomycotic infection of the hand as has been mentioned in British literature (Handfield-Jones, 1946).

(*f*) GAS GANGRENE

Street accidents are common, but gas gangrene rare. Possibly the increasing withdrawal of animal traffic from our streets accounts for this. One of our few cases deserves comment. This patient, who refused amputation, and only agreed to multiple incisions when there was gas infiltration of the lower abdominal wall, recovered with massive (two million units two-hourly) doses of penicillin and massive blood transfusion.

NON-TRAUMATIC SURGERY

INGUINAL HERNIA

Two features in the Bantu have been frequent enough to warrant comment. Direct herniae are uncommon. Even in the older patients, indirect herniae are the commoner. Secondly, in adult herniae the proportion of cases of a vaginal type with a completely patent processus vaginalis is high. Different registrars give figures between 27% and 40%. My own figure is 30%. It is in this type of patient in particular that one agrees with Taylor (1946) that simple excision of the sac is not enough. Since the sac is present from birth and the hernia develops in adult life only when the internal ring becomes incompetent, unless attended to the ring remains so after excision of the sac.

INTESTINAL OBSTRUCTION

One has heard it said that in the European to-day inguinal hernia can no longer be said to be the commonest cause of bowel obstruction. This may be so, but in the Bantu, hernia remains a common cause. In 49 cases of acute bowel obstruction both large and small of my own, inguinal hernia accounted for 15. Other causes are previous peritonitis and previous surgery. Impaction of a mass of round worms is a common cause of sub-acute obstruction. In the colon sub-acute obstruction has been due to left colonic or rectal carcinoma or to an amoeboma. Of acute colon cases, my own series is too small for adequate comment, but generally we have not had many cases. Of six personal cases, two were due to sigmoid volvulus, and the rest to advanced carcinoma. In one case a caecal blow-out occurred.

With regard to internal closed loops and strangulating forms of obstruction, one would make the plea that the student mind be made fully aware of the lethal propensities of closed loops, and the fact that strangulation may occur without the usual signs of acute luminal occlusion.

Of five cases of internal strangulation referred to me, all were missed by housemen in O.P.D. and admitted to medical or gynaecological wards. In another patient, a woman presented with what appeared to be incarcerated omentum in an inguinal hernial sac. The condition had been present for three days. Although she had had severe local pain, she had had no repeated vomiting and alleged that she had passed flatus more than once. She had no abdominal colic, nor distension, and her general condition was very good. Despite this, a foot of gangrenous small bowel had to be resected from a hernial sac.

SURGERY IN GENERAL

From the operative view, with the exception of herniae generally, only about 37% of our work covers elective surgery. In this group interest lies in the gross, the uncommon and the bizarre.

STOMACH AND DUODENUM

Peptic ulcer remains as rare in the urban as the rural Bantu. In more than three years I have performed only two gastric resections for duodenal ulcer in the Bantu, and have had only one proved benign gastric ulcer which occurred in a patient who perforated. Pyloric obstruction with a reflux barium into the hepatic ducts, and characteristically enough, a mass of round worms in the duodenum, can be seen in one of these patients.

Thus in a third patient said to be a 'bleeding peptic' one looked for the canary but missed the hood and spurs.

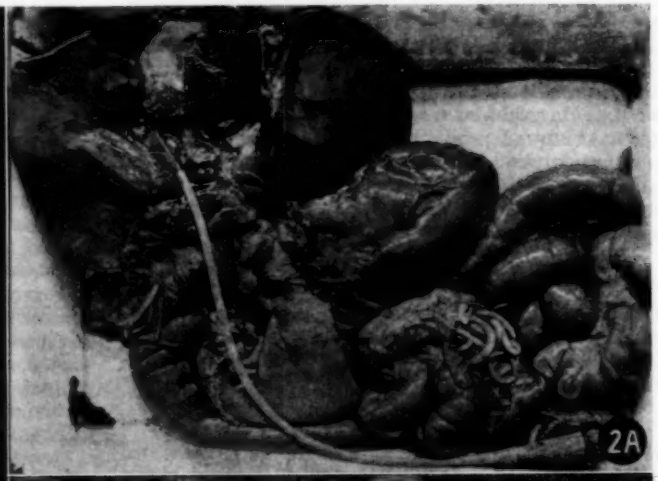
Case. Patient P.M. was admitted to a medical ward on 31 January 1948 by virtue of attacks of fainting followed by black stools. He was anaemic and a general clinical examination was essentially negative. He gave no peptic ulcer history, while a test meal showed a very low acid curve and large amounts of blood in the stomach.

X-ray examination revealed a persistent rounded filling defect in the first part of his duodenum (Fig. 1). We made a pre-operative diagnosis of simple tumour of the duodenum. At operation one found a bleeding duodenal varix associated with what appeared to be a cavernous haemangioma of his liver and a mesh of dilated engorged veins along the free edge of the lesser omentum. He was followed for some months after a gastric resection and had had no further bleeding.

PANCREAS, GALL-BLADDER AND BILE DUCTS

Pathology here is also uncommon. In the period under review one has only performed eight operations for

pathology of this type in the Bantu and it is again characteristic of our work that of these, three were congenital stenoses of the hepatic and common ducts; while a fourth case which presented several interesting features is worth comment in itself.



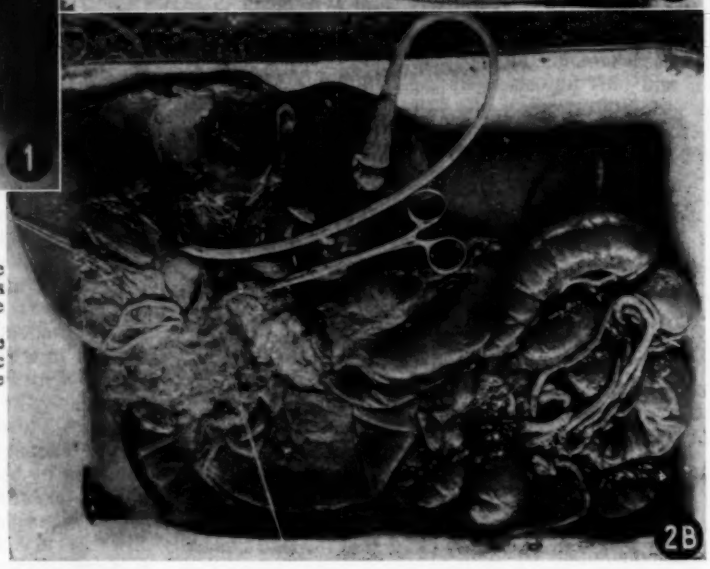


Fig. 1. Duodenal filling defect.
Fig. 2a. Shows the drainage tube in the dilated common duct. The duodenum is opened showing the head and tail of the worm entering it.
Fig. 2b. Shows the worm looped over the band, just above entrance of the pancreatic duct into the opening of which a probe has been inserted.

Case. The patient, a young adult Bantu, was admitted on 23 September 1947 suffering from acute and continuous upper abdominal pain of sudden onset. He was correctly diagnosed by the registrar as suffering from acute pancreatitis. This being an uncommon condition in the Bantu one was inclined to doubt the diagnosis. At laparotomy one found a pint of bile-stained peritoneal fluid. There was no fat necrosis, and the common duct was distended to the size of the small bowel. The gall-bladder and dystic duct were normal. His common duct was drained, and his condition being poor, he was closed. He died shortly afterwards. The necropsy conducted by Prof. R. H. Mackintosch and Dr. J. Friedman at the Government Pathological laboratory revealed a bizarre state of affairs. He had an oedematous and haemorrhagic bile-stained pancreas, and the entrance of his common duct into the duodenum was blocked by a round worm which had entered the duct, passed under a congenital band across the duct just above the entrance of the pancreatic duct, and looped back to emerge from the common duct into the duodenum (Figs. 2*a* and 2*b*). Although intestinal infestation with round worms is very common in our

patients this is the first and only case of biliary ascariasis we have come across. Yet in China and the Philippines the condition is not uncommon. Yang and Laube (1946) have written up a series and make a plea for early recognition and surgery. I am not aware of mention of this condition in the literature from sources in the Union, although it must occur.

MALIGNANT DISEASE

From the operative point of view the picture is a morbid one. In three years our records do not show a single case of carcinoma of the oesophagus or rectum which could be resected. Of my own cases all have been not only inoperable but too extensive and fixed to make resection feasible. In some cases a colonic cancer has been resectable but even here most of our patients present with gross obstruction in a late stage. Gastric-carcinoma does not present at all frequently and is usually well advanced.

We have seen more primary hepatic carcinoma than one sees in the European, the condition being superimposed on a deficiency cirrhosis. In this field, as elsewhere, we find gross and unusual pathologies, of which the following cases are examples.

Case (I). Patient J.M. admitted 12 June 1947 complaining of pain and swelling of the left mandible following a dental extraction. On examination he had soft tumour mass involving the alveolus in the region of the left lower molar teeth, with a diffuse swelling of the mandible itself. He had bilateral hydroceles with enlarged testes. He said this had been present for six months. He had a proptosed left eye, and an enlarged liver. On X-ray he had an osteo-lytic process in his left jaw suggestive of malignancy and an enlarged heart without clinical evidence of cardio-vascular disease. The W.R. was positive. Biopsy of the jaw's soft tumour showed an unspecified malignancy, the left testis on excision proved to be seminomatous. He developed soft tissue tumours in his scalp later. At post-mortem he had diffuse secondary deposits. There was a large secondary in his heart, and the opposite testis was also involved. This in itself occurs in only 1% of cases (Gordon-Taylor, 1948). He had secondaries in his skull, jaw, left orbit, and liver.

The X-ray features of this patient have been previously described (Findlay, 1948).

Case (II). Not very many mammary carcinomata present as compared with the European. My own series has been very small, yet of these one was a bilateral case in a male. This patient has already been written up (Hamman 1949). The condition occurs as 1% of 1% of all breast carcinoma. Our patient was alleged to be 89 years old, with luck he might out'ive Lunn's case (1896) in a man aged 91 years.

GENITO-URINARY WORK

This consists of the surgery of bilharzia, tuberculosis and urethral stricture. Prostatic bladder neck obstruction presents less commonly even in the older age groups. For this reason one advises that a one stage operation of the Wilson-Heys type be not performed in the Bantu unless one has satisfied oneself that a stricture is not present, or the cause of symptoms in itself. Incidentally we do not operate on cases of sub-acute or chronic 'appendicitis' without first cystoscoping the patient and investigating the right ureter for stricture, or a ureteritis.

APPENDICITIS

This remains relatively uncommon in the urban Bantu. In my own unit we have had only 11 cases, in three years, of proved acute appendicitis, though this figure excludes 'appendicular' abscesses treated conservatively.

AMOEBIC DISEASE

Our medical units deal with a fair amount of amoebic disease, and have adequate reason for their view that the disease may be contracted in Johannesburg. From the surgical point of view we get colonic amoebomata admitted under a diagnosis of carcinoma. The only type of this pathology we are called upon to treat on the surgical side is the occasional large liver abscess, in which we institute closed surgical drainage in cases where the abscess has increased in size and is in danger of rupture despite aspiration. Our management of these cases is along the lines advised by Keen (1947).

Worthy of mention is a case of ischio-rectal suppuration of amoebic origin which occurred in this hospital. (Norwich and Muskat, 1947.)

CONCLUSION

One has only touched on a subject which in some of its aspects warrants further investigation. I have attempted to draw attention to those features which have struck me during three years' full-time work at the Coronation Hospital. My observations in general are supported by the expressed opinion of the rest of our senior staff. Of the types of pathology I have mentioned, our collective records could produce many more.

I am indebted to Dr. V. D. Gordon, Medical Superintendent, for permission to publish this paper and to Prof. R. H. Mackintosh Government Pathologist and Dr. Jack Friedman, Senior District Surgeon, Johannesburg, for the photographs of the case of biliary ascariasis and permission to cite the necropsy findings. I have to thank Dr. J. Allen of the Non-European Hospital for the X-ray reproductions.

REFERENCES

Findlay (1948): S. Af. Med. J., **22,** 725.
Gordon-Taylor (1948): *Text-Book Genito-Urinary Surgery.* Winsbury-White. Edinburgh: E. & S. Livingstone Ltd.
Hamman (1947): S. Af. Med. J., **23,** 11.
Handfield-Jones (1946): *Surgery of the Hand.* Edinburgh: E. & S. Livingstone Ltd.
Keen (1947): S. Af. Med. J., **21,** 4.
Lunn (1896): *Cited by* Wainright (1927) in Arch. Surg., **14,** 836.
Norwich and Muskat (1947): Brit. J. Surg., **34,** 287.
Rowbotham (1945): *Acute Injuries to the Head.* Edinburgh: E. & S. Livingstone, Ltd.
Samson and Burford (1947): J. Thorac. Surg., **16,** 2.
Taylor (1948): *British Surgical Practice.* London: Butterworth & Co. Ltd.
Watson-Jones (1940): *Fractures, Bone and Joint Injuries.* Edinburgh: E. & S. Livingstone Ltd.
Yang and Laube (1946): Ann. Surg., **123,** 2.

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VAN DIE REDAKSIE

DIE BEHEER VAN TERING

In Julie vanjaar het ons 'n reeks verhandelinge deur dr. B. A. Dormer gepubliseer wat gewy was aan metodes om tering te beheer. Die belangrikheid van hierdie bydrae het gelê in die aanspraak wat dit gemaak het om hierdie gedugte toestand wat deur die siekte geskep is op eenvoudige, praktiese maniere die hoof te bied.

Twee van die belangrikste vereistes is beddens en verpleegsters en indien dr. Dormer se ontleding van die toestand juis is, kan eenvoudige skemas sonder veel versuim in werking gestel word sonder om die bronne van hierdie land òf finansieel òf op die gebied van beskikbare mannekrag te bowe te gaan.

Fundamenteel is tering egter 'n maatskaplike siekte en een belangrike sy van 'n werkplan wat ernstig op die probleem gemik is, is die behoefte om geldelike hulp te verleen, nie slegs om die gesin bymekaar te hou terwyl die broodwinner behandel word nie, maar ook om ná behandeling die teringlyer te help om geleidelik terug te keer tot normale werk op 'n grondslag waar hy met sy medemens kan meeding.

Op die oomblik is die geldelike hulp wat openbare owerhede vir hierdie doel kan verleen betreklik min, met die gevolg dat baie teringlyers om ekonomiese redes behandeling van die hand wys totdat dit te laat is. Die siekte hervat daarenteen by sommige wat behandel is omdat hulle nie teen die stremming van onmiddellike volle diens weerstand kan bied nie. In beide gevalle is hierdie tipes pasiënte 'n verdere gevaar vir die res van die bevolking onder wie hulle slegs dien om die siekte verder te versprei.

Vrywilliger-organisasies in Suid-Afrika sien die behoefte in om hierdie rehabilitasie-aspek van die probleem die hoof te bied. Die verhandeling deur mnr. Paul Sykes (in die *Tydskrif* van 22 Julie 1950) behandel inderdaad die uiters belangrike rol wat die nedersetting in teringbeheer speel. Die verskillende organisasies wat hulle aan hierdie sy van die saak wy, ondersteun die Suid-Afrikaanse Nasionale Teringassosiasie wat ook deur die Unie-regering erken word. Al hulle kragte word ingeskakel om genoegsame fondse te verskaf ten einde uitvoering te gee aan wat waarskynlik die belangrikste aspek van die stryd teen tering is.

Sommige van ons kollegas wat in noue betrekking met die probleem van die voorkoming van tering staan, het onlangs 'n plan aan die Kaapstadse Drie-eeufees-komitee voorgelê vir die stigting van 'n Drie-eeufees-

EDITORIAL

THE CONTROL OF TUBERCULOSIS

In July this year we published a series of papers by Dr. B. A. Dormer, devoted to procedures in the control of tuberculosis. The importance of this contribution was the claim it made for simple and practical ways to cope with the formidable situation which this infection has created.

Two of the major requirements are beds and nurses and if Dr. Dormer's analysis of the position is correct then uncomplicated schemes can be put into operation without much delay and without going beyond the resources of this country either financially or in the field of available manpower.

Tuberculosis, however, is fundamentally a social disease and one important aspect of a programme directed seriously at the problem is the need to provide financial help not only to keep the family together while a breadwinner is having treatment, but also to help the tuberculotic after treatment, to make a gradual return to full employment on a competitive basis with his fellowmen.

At present the financial aid which public authorities can give for this purpose is relatively small, with the result that many tuberculotics must, for economic reasons, refuse treatment until it is too late. On the other hand, of those who have been treated, many relapse because they are unable to stand the strain of immediate full employment. In both cases these types of patient are a further hazard to the rest of the population amongst whom they serve only to spread the disease more widely.

Voluntary organizations in South Africa recognize the need to cope with this rehabilitative aspect of the problem. Indeed, the paper by Mr. Paul Sykes (in the *Journal* of 22 July 1950) discusses the very important role of the settlement in tuberculosis control. The various organizations devoted to this aspect of the matter support the South African National Tuberculosis Association, which is also recognized by the Union Government. All their energies are being co-ordinated for the provision of sufficient funds to implement what is probably the most important aspect of the fight against tuberculosis.

Some of our colleagues, who are intimately concerned with the problem of prevention of tuberculosis, recently presented a plan to the Cape Town Tercentenary

teringtrust of nasionale skaal. Ons is seker dat indien die funksies van hierdie Trust onderstand aan die teringlyer en sy gesin sal beteken onderwyl hy behandel en later gerehabiliteer word, baie milde steun vir hierdie verdienstelike doel van die publiek verkry sal word.

Omdat tering 'n maatskaplike siekte is, glo ons dat die beste benadering vir die behandeling en voorkoming daarvan op 'n omvattende grondslag moet wees wat ons hele maatskappy insluit. Die Drie-eeufeesviering in 1952 sal ons almal 'n uiters paslike geleentheid gee om ons pogings vir die bereiking van hierdie prysenswaardige doel te verenig.

Committee to form on a national scale a Tercentenary Tuberculosis Trust. We are sure that if the functions of this Trust are to be the relief of the tuberculotic and his family during treatment and his later rehabilitation, extremely generous public support for this worthy aim will be forthcoming.

Because tuberculosis is a social disease, we believe that the best approach to its treatment and prevention must be on a comprehensive basis involving the whole of our society. The occasion of the tercentenary in 1952 will give us all an opportunity, on a most appropriate occasion, to unite our efforts to achieve this most laudable object.

ROSEOLA INFANTUM

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Roseola infantum is also known under the synonyms rose-rash of infants, exanthema subitum, pseudo-rubella infantum and sixth disease.

The object of this article is to draw attention to a disease which, considering its wide prevalence, is but little known and is frequently misdiagnosed in daily practice; and to show that the name Exanthema Subitum, i.e. unexpected exanthem, is a misnomer, and that it is possible to diagnose this illness in the pre-eruptive stage.

Roseola infantum is not a new disease. It was first accurately described by Zahorsky[1] in 1910. Since 1921 it has been reported from many parts of the world. The condition is common in this country, although it is probably not quite as prevalent as in the U.S.A. where 'in the majority of infants and children between the ages of 6 months and 3 years there occurs a disease in which difficulty of diagnosis for the physician and worry of the parents can hardly be greater. . . .'[2]

The recognition of this disease by its characteristic course and blood picture has acquired added importance because, since the danger of coccal infections has diminished through the use of antibiotic drugs, a confusing crop of syndromes of virus origin seems to have sprung up; so much so, that the public begins to realize that the term 'virus disease' has become an expression of the doctor's bewilderment and impotence. All the available evidence points to a virus as the causative organism of roseola infantum, although its isolation has, so far, not been achieved. The virus of German measles, although frequently mooted as a cause, is probably not the agent responsible for this condition, because, if rose-rash occurs after infancy, as it does in rare cases,[3] it seems to run a course quite distinct from rubella.

Roseola infantum has its main incidence between the ages of 6 and 18 months. However, it occurs not infrequently during the first few weeks, or even days, of life. It is seen only rarely after the age of three years, but undoubted cases have occurred in adults.[3] The incubation period ranges from 8-14 days, with a maximum incidence between the 10th and 12th days. The infectivity rate is low, and I have never seen more than one case in the same house; but in a recent outbreak in a maternity hospital[3] the incidence rose to 29.2% amongst the infants. This must be considered an exceptionally high figure, even in an institution with a highly susceptible 'population at risk'. The disease occurs throughout the year, but in the Transvaal cases are encountered more frequently during the hot season. The mortality rate is negligible.

In most of its manifestations the disease follows an amazingly constant pattern, as can be seen from the brief case histories at the end of this article. A child, usually between the ages of 6 and 18 months, is noticed to become irritable. The irritability is most marked during the night, and the child wakes up repeatedly, crying as if in pain. The mother then finds, usually when changing the napkin, that the child is 'burning hot'. If the temperature is taken at this stage, it is probably between 103° and 105° F. The pyrexia persists for two to four days, although it often undergoes rapid falls and subsequent rises of one to three degrees during this time, several such changes occurring sometimes in the space of a few hours.

In about 10% of the cases the child has a convulsion during the early stage of the pyrexial period, and some meningismus occurs in an even larger number of cases. The cerebrospinal fluids of 10 cases on whom lumbar punctures were performed at the Transvaal Memorial Hospital for Children, showed normal values for chlorides, sugar and albumin, and the cell count never exceeded one polymorph and/or three lymphocytes per c.mm. Similar results have been reported recently by others.[4]

The conjunctivae are mildly injected in about half the cases, and there is then some slight photophobia which is mostly masked by the general irritability of the child.

Enlarged lymph glands are present in almost all cases. Jennings [5] noted an enlargement of the cervical lymphodes in 80% of his patients and used this fact as his most important diagnostic criterion. James and Freier [3] found the cervical or axillary glands enlarged in 14 out of 19 infants of their series. The frequent involvement of the occipital group of glands is quite a feature of this condition. The glands are always discrete and painless and measure 3-10 mm. in diameter. A large spleen can be felt in about 10% of patients. This sign is of doubtful diagnostic value, because a spleen can be felt frequently in otherwise normal infants.

A tachycardia of 160 per minute or over is present during the pre-eruptive stage. A leukopenia, neutropenia with relative lymphocytosis, is a very constant feature on the second to fourth days, except after a convulsion when the cell count may reach 20,000 per c.mm.

Nearly all cases of roseola infantum can be diagnosed in the pre-eruptive stage by a triad of symptoms, viz. high pyrexia, irritability and a remarkable preservation of the appetite. The other signs are less constant, but one or other of those mentioned above is always present to strengthen the diagnosis. I know of no other illness of infancy or early childhood, with a comparable degree of pyrexia, which is unaccompanied by bowel disturbances, clouding of consciousness or signs of toxaemia, and above all, anorexia. The child suffering from roseola infantum, in spite of a temperature of 104° or 105°, looks bright and alert and, although very irritable, usually takes its accustomed feeds and retains them.

The exanthem appears typically on the fourth day of the illness, but it may be difficult to determine accurately the date of onset of the pyrexia. Therefore, if the fever has passed unnoticed for the first 24 hours, the rash may be thought, quite mistakenly, to have erupted on the third day. Defervescence, however, may occur a full 24 hours before the first components of the rash make their appearance. These consist of a few pinkish macules on the abdomen and back which are 2-4 mm. in diameter. They blanch on pressure. The eruption reaches its height in 12-24 hours when it covers the trunk and the neck of the child. Isolated components of the rash can be found on the proximal areas of the arms and legs, but the more distal parts are not involved. Apart from a few macules in the pre-auricular area and on the occipital area of the scalp, the head remains free of the eruption. The rash becomes confluent over points of pressure, i.e. the shoulders, the buttocks and wherever the napkin may have pressed on the skin. Occasionally the rash is slightly raised above the skin. The exanthem fades in 12-24 hours without desquamation and without leaving pigmented stains. It is very rare for the pyrexia to continue during the stage of the rash. In the majority of cases the child is afebrile throughout this period.

The differential diagnosis from measles should present little difficulty, because in that disease catarrhal manifestations and general disturbances are pronounced, Koplik's spots are present in the pre-eruptive stage, and the patient's condition worsens when the exanthem appears.

In German measles the pyrexia rarely precedes the rash for more than 24-36 hours. The fever continues during the stage of the rash, and the latter involves the face of the patient.

The pyrexial stage of roseola infantum may be mistaken for pyelitis, and this does, indeed, happen quite frequently. The medical attendant is unable to find positive evidence of disease in the usual places, i.e. the ear, throat, chest or abdomen. He hazards a diagnosis of pyelitis and prescribes a mixture of Pot. Citrat. and Bellad., or one of the sulphonamide drugs. When the rose rash appears on the fourth day this is explained away by a diagnosis of drug sensitivity. The diagnosis of pyelitis may even be supported by positive urine findings. In four of the cases quoted by Freier and James [3] pus was present in the urine, and in three of these *B.coli* was grown when the urine was cultured. This seems to confirm one's own impression that *B.coli* and pus cells can, on occasions, appear in the urine during pyrexia from any cause.

The diagnosis of meningitis or encephalitis is frequently entertained when there is evidence of meningism or when a fit has occurred. In rose rash there is little clouding of consciousness either before or even shortly after a convulsion, the child appearing bright although very irritable. Vomiting is a definite feature of intracranial pathology, but is very rare in roseola. The preservation of the appetite usually leaves very little doubt about the diagnosis. The findings in the cerebrospinal fluid have already been discussed.

The treatment of roseola infantum resolves itself into the control of the high pyrexia. Aspirin gr. V has been found entirely satisfactory for this purpose in all cases.

SPECIMEN CASE REPORTS

i. D. N., aged 11 months, was first seen on 18 February 1950. The child had been very irritable on the previous day and, on direct questioning, the mother said she thought that the child had been somewhat feverish. On the day the case was first seen the mother suddenly realized, while changing the napkin, that the baby felt very hot. The temperature was then taken and found to be 105° F. The baby had just finished his usual lunch-time meal without difficulty. He had not vomited and the stools were normal. No other members of the family were, or had been, affected similarly. A brother aged 4 years had suffered from measles five months before, but the baby had remained healthy at that time.

The child was found to be irritable, somewhat bleary eyed and slightly photophobic. There was one gland the size of a hazel-nut in the right groin. Numerous smaller glands were found in both groins, the axillae and the posterior triangles of the neck. *Mouth*: N.A.D. *Ears*: N.A.D. *Lungs*: N.A.D. *Heart rate*: 160+ per minute. *Spleen*: 1" below the costal margin.

Diagnosis: Roseola infantum.

Treatment: Aspirin gr. V, b.d., sponging S.O.S.

19 February 1950. The child slept well during the night after taking the aspirin. Breakfast was taken as usual. The eyes were still suffused. Temperature, 101.4° F. Pulse: 160 per minute. Sweat rash in the groin, and on the neck. Total white cell count: 4,800 per c.mm.

20 February. Patient apyrexial in the afternoon. Eyes clearer. Faint rash appearing on the abdomen and back.

21 February. Rash fully developed. Pinkish, morbilliform rash on abdomen and back. Confluent over areas of pressure. Isolated macules on proximal parts of arms and legs. Child apyrexial.

22 February. Rash very faint. Child normal in all other respects.

ii. *31 December 1948.* R. L., aged 10 months, had become

increasingly irritable since the previous day. The mother stated that the child had been rubbing her ears. Fearing ear trouble, she had taken the child's temperature which was found to be 103° F. The child had not vomited and the bowels were confined. The child presented a picture of marked irritability. Several enlarged glands were palpable in the axillae and groins. The eyes were reddened and there was some photophobia. A slight nasal catarrh was present. The right ear drum was, at this stage, thought to be slightly injected in its upper half. However, the changes in the drum were thought to be insufficient to account for the pyrexia. The left ear was normal.

Diagnosis: Roseola infantum, and ? right-sided otitis media. In view of the latter, 300,000 units of Duracillin were administered.

1 January 1949. The child was very restless during the previous night. Temperature 103° F., irritability persisting. Just before lunch the child suddenly had a convulsion. The temperature was reduced to 101° F. by sponging, and aspirin gr. V was given as soon as possible after the convulsion. The appearance of the right drum was now found to be perfectly normal. Meals and fluids were taken normally during the remainder of the day. There was no vomiting and the bowels did not act. Catheter specimen of urine: N.A.D.

Total white cell count: 8,800 per c.mm.

2 January. The child slept well during the greater part of the night. Temperature 99.8° F. Coryza still present. Less irritable. *Ears*: N.A.D. A few pink macules visible over the child's back in the afternoon.

3 January. Rash over the whole of the trunk, more pronounced over the back, but no confluent areas were noted. No rash on face or extremities. Glands still palpable. Apyrexial.

4 January. The rash has disappeared. Child perfectly normal in all respects.

SUMMARY

The salient features of roseola infantum are described. The condition is commonly encountered in the Transvaal and it can be diagnosed during the pre-eruptive stage by the irritability of the child, the high pyrexia and the remarkable preservation of the appetite.

I wish to thank Dr. Seymour Heymann, Senior Paediatrician, Transvaal Memorial Hospital for Children, for his advice and for his permission to publish the cerebrospinal fluid findings referred to above.

REFERENCES

1. Zahorsky, J. (1910): *Pediatrics*, **22**, 60.
2. Mitchell-Nelson (1945): *Textbook of Pediatrics*, 4th ed., p. 451.
3. James, U. and Freier, A. (1949): Arch. Dis. Childh., **24**, 54.
4. Berenburg, W. *et alii* (1949): New. Eng. J. Med., **241**, 253.
5. Jennings, R. E. (1940): J. Med. Soc. New Jersey, **37**, 577.

ROSEOLA INFANTUM

FRANK WALT, M.R.C.S., L.R.C.P., D.C.H. (ENG.)

Durban

Exanthem subitum—the unexpected rash—is probably the commonest infectious disease acquired in infancy but one which is rarely recognized. It is usually not severe enough to warrant admission to hospital and so is rarely seen by the student and intern. It is seldom included in the short paediatric course at medical schools. The general practitioner, therefore, is often unfamiliar with a common clinical entity.

The disease was described in 1910 by Zahorsky. Later Veeder and Hempelmann (1921) also drew attention to it and since then large series of cases have been reported in the literature, especially in America. Cases are common in South Africa, the writer having collected 16 in the past two years in specialist paediatric practice. The busy domiciliary general practitioner probably comes across many more and, in fact, it is probably the commonest infectious disease in infancy.

The onset is sudden with fever, anorexia and irritability with little constitutional upset. The mother usually thinks her baby is teething but by the second or third day of irritability anorexia and fever she gets worried and sends for the family doctor. He is also puzzled as there are few localizing signs, the infant having a temperature of 101°-103° F, and appearing comparatively well. In fact, the baby may be quite playful as he has his ups and downs of grizzling and well-being. Examination of the back of the neck may reveal enlargement of the occipital lymph glands, while the throat may be somewhat reddened.

No other signs may be present and he will tell the mother the diagnosis is uncertain and will test the urine for pyelitis. If this is normal then teething or 'the rose rash of infants' is the most likely diagnosis.

If facilities are available, a white blood cell count will show a leucopenia varying between 2,000 and 6,000 cells per c.mm., with a relative lymphocytosis.

By the fourth or fifth day the temperature settles by crisis or lysis and a typical rubelliform rash appears within 48 hours, starting at the back of the neck and soon spreading to the abdomen and trunk. It usually spares the face and limbs and fades quickly without desquamation. It may be delayed and appear as late as the seventh day on rare occasions.

Differential Diagnosis. Roseola infantum is the only infectious disease in which the exanthem appears when the patient is better and the pyrexia has settled. In German measles the rash appears early at the same time as the fever, the course is shorter, the enlargement of occipital and post-cervical glands is more pronounced and its age incidence is higher. It often occurs in epidemics. In measles the temperature remains high on the appearance of the rash and there is cough, coryza and conjunctivitis. Koplik spots are diagnostic. Those of us who believe that teething will cause fever, irritability and anorexia, will consider this diagnosis. It is foolish, however, to be dogmatic and blame the teeth before the syndrome settles down on their eruption, because in the meanwhile a rose rash may appear and there will be no need to call it a 'teething

rash'. Pyelitis will be ruled out by microscopic examination of the urine.

While complications rarely appear in this disease and the diagnosis is therefore of no great importance, awareness and early recognition will prevent misdiagnosis and unnecessary treatment. It will reassure the parents and will obviate the use of sulphonamides or penicillin, as their exhibition may be thought later to produce a 'toxic rash' and thus obscure the diagnosis.

Aetiology. The disease is thought to be caused by a virus but this has not been proved. It occurs most commonly between the ages of three months and three years, the maximal incidence being between six and 24 months. It has been described in the new-born and in adults and recently James and Freier (1949) reported an epidemic in a maternity home which affected the babies, mothers, nurses and even spread to the fathers. These periodic epidemics suggest the infectious nature of the disease with a probable spread by adults. The sex incidence is equal. The incubation period is five to 15 days with an average of 12 days (Barenberg and Greenspan, 1939).

Physical Findings. The infant has fever which varies between 103° and 105° F and persists for three to five days. The occipital lymph glands are very commonly enlarged, and also the post-cervical group. This is a useful sign, especially about the third or fourth day, when the glands seem to become bigger. They are discrete, mobile and not tender.

Clemens (1945) described specks and streaks on the soft palate in 87% of his 80 cases while Berenberg and others (1949) thought they were pink pin-point elevations due to areas of lymphoid hyperplasia. They suggest that they may be easily overlooked by the examiner and the writer must admit that he has failed to observe them in the past. This is probably because special attention has not been paid to that part of the palate. Their presence must certainly be a helpful sign.

The rash is very like that of German measles and is macular, pink and discrete. It starts behind the ears and neck and rapidly spreads to the abdomen and trunk, usually leaving the face and limbs comparatively free. In 24 hours it is fully developed and there is no itch or desquamation. This exanthem only appears

TABLE I. ANALYSIS OF CASES

Case No.	*Sex*	*Age in Months*	*Irritability*	*Anorexia*	*Fever*	*Enlarged Glands*	*Day of Normal Temperature*	*Day of Appearance of Rash*	*Comment*
1	M	6	+	+	101·6	+	3	4	
2	M	19½	−	−	105	+	3	5	Injected throat.
3	F	8	++	+	Raised	+	3	4	White cells, 2,000 per c.mm. Remained irritable for a week.
4	M	7½	−	−	104·2	−	3	4	Onset with convulsion.
5	F	4	++	+	104	−	6	7	
6	F	19	+	−	101	+	3	5	Onset with convulsion.
7	F	14	+	+	102	+	4	6	
8	F	11	+	+	Raised	−	4	6	Onset with vomiting. Collapsed when temperature fell.
9	F	9½	+	+	103·4	−	3	3	Had loose stools for a week before onset with fever.
10	F	11	+	+	Raised	−	3	4	Mother 'almost did not consult doctor'.
11	F	7½	+	+	Raised	−	3	3	Mild case.
12	M	14	++	+	Raised	−	3	4	
13	M	10	++	−	Raised	+	4	5	Onset with loose stools and temperature: follicle on tonsil and so given penicillin injection.
14	F	23	++	+	102·2	++	4	5	Onset with loose stools and two convulsions.
15	M	16	++	+	102·6	−	4	5	
16	M	8	+	−	101	−	3	4	Onset with vomiting and fever.

when the temperature is normal or near normal but may appear as long as 48 hours after the crisis. As it often fades rapidly it may come and go overnight. Berenberg and others (1949) saw a few typical cases in which the rash only lasted for four hours. In Case 7 the rash appeared 48 hours after the infant's temperature was normal and while she was up and running about.

A few cases may show exudative follicles on the tonsils and be treated as acute tonsillitis until the rash suddenly appears and makes the diagnosis obvious. This is what occurred in Case 13.

Complications. The sudden onset with fever may be accompanied by a convulsion (Cases 4, 6, 14) the incidence of which varies between 6% and 12% (Greenthal, 1941). Transient hemiplegias have been described by Rosenblum (1945) and Berenberg (1949). These usually recover completely in a few days, but Posson (1949) described three cases two of which had residual weakness months later. Examination of the cerebrospinal fluid is normal but recently Holliday (1950) reported five patients with encephalitis before the eruption of the rash, in two of whom the cerebrospinal fluid showed a pleocytosis and in two others an increase in pressure.

Collapse may occur if there is a sudden drop of temperature within a few hours. It may fall from 104° to 97° F leaving the infant pale, cold and apparently shocked (Case 8). Unless one is familiar with this clinical picture it can be disturbing; to the parents it is quite frightening. Treatment consists of warmth to the infant and reassurance of the worried parents.

Irritability, in some cases, may continue for a few days after the temperature has settled.

Prognosis and treatment. The prognosis is excellent while the treatment is purely symptomatic. Aspirin and phenobarbitone is a useful combination for the fever and irritability.

DISCUSSION

Until further knowledge accumulates it is best to accept roseola as a viral infectious disease spread by adult carriers with life-long immunity from one infection.

Because the disease is so rare among older children and adults it suggests that there may be a universal infection before the age of three years. Because few cases occur before six months of age an immunity derived from the mother is very probable, as in other infectious diseases. This possible immunity probably varies and while it is diminishing it may allow modification of the disease. That abortive attacks occur is debatable but Barenberg and Greenspan (1939), reporting an epidemic in an infants' home, found three cases which had the symptoms signs and typical blood picture of roseola, but without production of a rash. The writer, too, has records of cases which conformed to the clinical picture of roseola, ran the typical course but then settled down without the exanthem. It is possible but unlikely that the rash appeared and faded very quickly or overnight, as the mothers were asked specifically to watch for it and they did not observe it.

If *roseola sine eruptione* is a clinical entity, one must wonder what part it plays in the pyrexias of unknown origin which are such a bugbear in paediatric practice. Infants are known to be thermolabile and a minor upset may produce some fever, but are pyrexias of two and three days' duration still to be blamed on the teeth or the kidneys, or will we, in the future, be able to label a large percentage of them roseola infantum?

Despite its being a mild disease with few complications it should be sought for diligently as its recognition and early diagnosis will prevent unnecessary active treatment. If, whenever 'mild measles', German measles, teething or drug rash is diagnosed, roseola infantum is also considered, more cases will be discovered and there will be fewer children who are said to have had two attacks of measles within a few years of each other.

SUMMARY

1. The signs and symptoms of roseola infantum are described.

2. The age incidence is predominantly between three months and three years.

3. Although it is a mild disease, there are variations in which convulsions and collapse are prominent.

4. The only important complication is hemiplegia, which is rare, usually transient and probably connected with a convulsion.

5. The diagnostic criteria are stressed in the hope of preventing unnecessary therapy and a warning is given to be wary of such diagnoses as teething rash, drug rash, mild measles and German measles in infants.

6. The treatment is symptomatic.

7. Its part in pyrexia of unknown origin in infants is discussed briefly.

8. A table analysing 16 cases seen in the past two years is presented.

REFERENCES

Barenberg, L. H. and Greenspan, L. (1939): Amer. J. Dis. Child., **58,** 983.
Berenberg, W., Wright, D. and Janeway, C. A. (1949): New Eng. J. Med., **241,** 253.
Clemens, H. (1945): J. Pediat., **26,** 66.
Greenthal, R. M. (1941): Wisconsin Med. J., **40,** 25.
Holliday, Jr., P. B. (1950): J. Pediat., **36,** 185.
James, U. and Freier, A. (1949): Arch. Dis. Child., **24,** 54.
Posson, D. D. (1949): J. Pediat., **35,** 235.
Rosenblum, J. (1945): Amer. J. Dis. Child., **69,** 234.
Veeder, B. S. and Hempelmann, T. C. (1921): J. Amer. Med. Assoc., **77,** 1787.
Zahorsky, J. (1910): Pediatrics, **22,** 60.

NEW PREPARATIONS AND APPLIANCES

PLASTIC SKELETONS IN ANATOMY TRAINING

For many years now students of anatomy have been handicapped by an almost total dearth of reliable visual aids. Skeletons and parts of the human bone structure have always been difficult to come by, and since the war the difficulties have substantially increased, to the disadvantage of the student. Today, thanks to the persistence of the plastics industry and the experiments by high medical authority, the shortages of skeletons have become of minor importance, since for all instructional purposes plastic bones have replaced both real bones and synthetic bones of other materials. Every section of the skeleton is now available in plastic—from the complete, articulated 206-bone skeleton down to the smallest bones required for special study and investigation.

Medical men are agreed that there are few examples of what may be termed a perfect skeleton. When a perfect or near-perfect body is discovered, the possibility of acquiring the skeleton after death is remote. The 'bones' now being marketed from plastic mouldings are claimed to be the nearest possible approach to perfection, since in making the individual moulds the best samples of human bones have been used.

Educational establishments have hitherto had to rest content with such limited specimens of human bones as it was possible to obtain. Students requiring to specialize on particular structures have had to do their own sorting through the collections of specialist stockists. Buyers had little range of choice, and it has always been a question of taking what was available and hoping against deformity. Institutions which needed and could afford a complete skeleton needed to wait up to two years and then to observe a strict rotation. Prices, too, have been high; and the individual student has been compelled to do without impedimenta he would much like to own, and to share with co-students just what has happened to be available at the centres of instruction.

That unfortunate situation has now changed. Any section of the human skeleton may now be obtained, from the complete 'Jimmy' down to the smallest component. Plastic bones are usually less brittle than the real thing, and are unquestionably able to stand up to greater handling than plaster of paris. They can be coloured as desired, and the colouring removed at will. They have substantially reduced current market values and there is no waiting list.

Although the demand for complete skeletons is considerable, both in this country and abroad (where the deficiency is equally acute), equal interest is being shown in the smaller formations. Midwifery instruction is being aided by the use of the complete female pelvis and foetal skull model. Study of the foot is assisted by the availability of the completely articulated member. Plastics development has not been confined solely to matters of osteology. A tutorial 'eye' has been developed. Represented by two hemispheres which correspond to the anterior and posterior halves, it is mounted on a stand, the base of which carries a meridional view of the eye superimposed on a corresponding and fully annotated view of the anatomy of the eyeball. Nerve distribution, vascular supply, and muscles are clearly marked in the appropriate anatomical colours, and study of the interior and exterior structures is facilitated by opening the model along the central transverse section.

The development is undoubtedly a considerable step forward along lines every student of medicine has desired. To bring individual sections of the human skeleton within easy reach of the individual pocket is a step to be applauded, and Mr. T. W. Fazakerley (Education and Scientific Plastics, Ltd., Croydon), who with his medical advisers, has been largely responsible for achieving it, fully deserves the appreciation which is being shown by users in many overseas countries.

Supplies are available from the sole South African agents:—Gurr Surgical Instruments (Pty.) Ltd., P.O. Box 1562, Johannesburg.

VERENIGINGSNUUS : ASSOCIATION NEWS

NATAL COASTAL BRANCH

MINUTES OF A CLINICAL MEETING HELD ON 23 MAY 1950 AT THE ADDINGTON HOSPITAL, DURBAN

Present: Dr. H. Renton, President, occupied the Chair and some 90 members and guests attended.

Dr. J. A. Macfadyen presented the following cases:

1. *Polyneuritis* in an adult European female, associated with a lower motor paralysis of the right side of the face and lower motor paresis of both lower limbs, the upper limbs being normal.

Dr. Macfadyen said that although such a condition was not uncommon its association with tick typhus was not generally known. This particular patient had a weak positive Weil-Felix reaction and had shown marked improvement on Chloromycetin. Within the past six weeks he had had two private patients with a similar condition. In the first the nerve lesion was almost identical and improvement on Chloromycetin was marked. The second patient developed an upper motor lesion of right face, arm and leg, but had relapsed after improving on Chloromycetin.

Dr. Macfadyen gave a brief survey of encephalitis from the Type A epidemic of 1917 to that of Type B in China in 1948.

Dr. J. Drummond mentioned the epidemic of tick paralysis in Siberia during 1925 when there were very large numbers of cases, but all signs and symptoms had disappeared within 24 hours after removing the tick.

2. *Porphyrinuria* in a European female, aged 28 years, 5 para and 3 months pregnant on admission. Shortly before admission she had complained of low back pain and red coloured urine. There was a basophilia and she developed a rapidly ascending paralysis and died.

Dr. Macfadyen gave a short account of the etiology and symptomatology of this condition and mentioned that a specially tragic feature was that the patient remained mentally quite clear to the end.

Dr. J. Drummond remarked on the possible influence of a urinary infection in the etiology of the paralysis.

3. *Cerebral Injury* in a European male aged 54 years,, who had been struck on the back of the head by an iron bar some six weeks before admission when he was found to be aphasic, had a poor memory, and had great difficulty in performing purposeful actions (apraxia) e.g. tying a neck-tie. In view of the history and of the X-ray report of cerebral oedema *Mr. Copley* had been called in.

Mr. Copley dealt briefly with the possibility of a blood cyst and remarked that in this condition localizing signs were notoriously unreliable. In this case he had made a burr-hole in each subtemporal region and as the dura had appeared to be normal on both sides he had considered that a blood cyst was not likely to be present. On exploring with a needle he had obtained a few drops of cerebrospinal fluid from the right but 4 c.c. from the left. This he considered pathological, probably indicating a chronic subdural hygroma of traumatic origin.

The patient had been completely aphasic for a week following the operation, but after that had improved on his pre-operation condition. *Mr. Copley* considered that weekly tappings through the burr-hole should be done.

Dr. J. Drummond said that that tapping probably would not bring about a cure and recommended an operation to close the tear in the membranes.

Dr. H. A. Holmes demonstrated the radiological features on which he had reported the presence of cerebral oedema.

4. *A Case of Pelvic and Chest Pathology for Diagnosis* (Presented by Dr. H. Renton). A résumé of the case notes was circularized.

Dr. H. de Villiers detailed the clinical findings.

Mr. Copley said he had been asked to see this patient and had considered that probably the condition was one of pneumococcal septicaemia with peritonitis and pneumonia and, later, a residual pelvic abscess.

Dr. Linder described the condition as presented by the patient on arrival in the ambulance.

Dr. Bennee thought that torsion of an ovarian cyst should be considered.

Dr. Standing said that the history was more like that of a bowel condition.

5. *The Use of Hyaluronidase* in the treatment of dehydration in infants was detailed by Dr. F. P. Walt who said that this drug considerably increased the absorption of fluids from the subcutaneous tissues. It was found in snake and spider venom, spermatozoa and the testis and was now prepared from bovine testis as Alydase which was not stable in solution. Hyaluronic acid prevented fluids from diffusing between the cells and the enzyme counteracted this. The enzyme could be conveniently administered to infants by injecting a solution of it into the tube of a subcutaneous drip, but it would not obviate intravenous infusion in desperately dehydrated infants. With this drug 200-600 c.c. of fluid could be absorbed from the sub-cutaneous tissues in a few hours.

The toxicity was practically nil but fluid may cause oedema of the scrotum which would disappear in a few hours.

Other uses to which the drug may be put were:

(a) For quick absorption or drugs, e.g. large amounts of anti-diphtheritic serum;

(b) In local anaesthesia to increase the area of spread;
(c) Dental Surgery;
(d) Lowering the viscosity of fluids in the pleural cavity, thus rendering aspiration easier;
(e) In Hydrocephalus it had no effect;
(f) For the absorption of pleural and pericardial fluids;
(g) In pyelography.

Hyaluronidase in Pyelography. Dr. H. R. Holmes said that Pyelocyl was rapidly absorbed from the subcutaneous tissues after Alydase. One hour after injection there was a good delineation of kidney, pelvis and calyces, but that as no standards of normal had been established yet, it was not possible to use this as a test of renal function. With intravenous pyelography the optimum time was 15 minutes.

With this drug results comparable with those of retrograde urography could be obtained.

Mr. Murless mentioned that Alydase is used in certain cases of sterility since, if the content in the semen was low, the gel surrounding the ovum was not dissolved and the sperms could not enter it.

Dr. J. Drummond uttered a word of warning in that Alydase might cause the spread of a localized infection. He said that in rheumatic fever this enzyme was present and so aided the spread of the infection and that the virtue of salicylates lay in that they destroyed this enzyme. Costisone also prevented the action of Hyaluronidase.

MINUTES OF A CLINICAL MEETING HELD AT RED CROSS HOUSE, OLD FORT ROAD, DURBAN, ON 21 JUNE 1950

Present: *Mr. Arthur Copley* in the Chair and 70 members.

Subject: *Antibiotics*: *'Where we stand to-day'.*

Dr. J. C. Thomas, Pathologist, touched on a few of the more general aspects and stated that the history of the present day use of antibiotics commenced in 1934 when Selman Waksmann, Professor of Microbiology, Rutgers University, U.S.A., met Dr. du Bois of Paris on board a transatlantic liner. During the late war, Waksmann turned his attention to the medical application of these agents. Dr. Thomas remarked that during 1949 the U.S.A. produced 6½ tons each of Penicillin, Chloromycetin, Streptomycin and Aureomycin, while the lesser four were Bacitracin, Aerosporin, Polymycin and Neomycin. He considered that Neomycin was one of the coming antibiotics and probably would replace Streptomycin especially as it did not produce resistant strains of tubercle organisms.

Penicillin affected the growing and multiplying of the bacterial cell and Penicillin-resistance had increased from 12½% in 1946 to 59% in 1948. This resistance to Penicillin was reversible; on the other hand Streptomycin-resistance was fixed. Streptomycin affected the terminal stage of the respiratory mechanism and resistant strains of an organism were always present.

Dr. Thomas advised that in all cases of tuberculosis and other infections where the initial improvement was not continued, the test for resistance should be made. Dosage must be such as to produce and maintain an effective concentration at the site of the organism and could be controlled from blood level estimations. To overcome the development of resistant strains he advocated the use of two antibiotics in conjunction, e.g. Penicillin with sulpha preparation. He then referred to a roneoed sheet which he had distributed giving a long list of infections and the antibiotics found most useful for each. *Dr. Thomas* deprecated the tendency to rush to antibiotics in any infection with the result that by natural selection resistant strains of organisms might be developed thus doing a grave disservice to posterity.

Dr. J. A. Macfadyen, Physician, said that the chief points to be considered in choosing an Antibiotic were: (1) activity, (2) toxicity, (3) ease of administration and (4) comparative lowness of cost as regards price of the drug, hospital expenses and fees for medical attention; but the severity of disease outweighed other considerations. He thought that a combination of antibiotics might be more effective.

In giving Aureomycin, larger doses were employed at first to obtain a satisfactory blood level except in brucellosis where a Herxheimer-like reaction might develop. He suggested the dosage. In severe infections it was said to be successful intravenously, or the initial dose of a course could be so administered. In serious cases the drug should be continued for five to seven days after the cessation of symptoms.

Dihydro-streptomycin was said to be less toxic than Streptomycin and during a course of Aureomycin nausea, vomiting, diarrhoea, and anal and oral excoriation might be severe. For this he advised vitamins B and K to be given in prolonged courses and that the patient be kept in bed. He also referred to Terramycin and specially to Neomycin which had one-tenth the toxicity of Streptomycin and five times its activity against tubercle, Brucella, Salmonella, *Entamoeba histolytica* and cholera; to Polymyxiz for rickettsial infections and pertussis, and to Enneatin.

Dr. Macfadyen considered that judgment on all these new antibiotics should be reserved until more was known about them. It was to be remembered that antibiotics only repressed the activity of organisms until natural means overcame them. He said that the infecting organism should be recognized, the most suitable antibiotic selected and an adequate blood contraction maintained.

Dr. H. L. Wallace, Pediatrician, considered antibiotics in children in whom the action was similar to that in adults. He dealt with infections in early infancy and stated that a large proportion of serious infections, especially in the first month of life, were due to *B.coli*, e.g. pneumonia, meningitis, pyelitis, septicaemia and he considered that Penicillin was quite useless generally except for skin infections and that the best drugs to use were the sulphonamides or the newer antibiotics, and advised that both Penicillin and a sulpha drug should be given.

Dr. Wallace said that Penicillin should be given orally and not by injection, which often resulted in subcutaneous abscesses. Chloromycetin should be given with a spoon as a powder in jam or liquid, as an infant could not swallow a capsule. This might mean a 4-hourly battle ending in vomiting. In severe vomiting a capsule could be pierced at both ends and inserted into the rectum, but the dose should be 50% larger than by mouth. Aureomycin, he said, might cause severe sore mouth if the capsule was not swallowed whole.

Dr. Wallace thought that we stood on rather unsure ground with antibiotics in the child and he disapproved of the indiscriminate use of these drugs in the child who was very fever prone, i.e. developed a high pyrexia with a relatively mild infection. He said that the present-day tendency to regard pyrexia itself as an indication for an antibiotic was bad medicine and therapeutics, and not without risk and that by careful examination it was nearly always possible to exclude known serious or dangerous diseases which would require antibiotics. He remarked that this was an 'Antibiotic Age' and one should exercise restraint and use them as antibiotics, not as antipyretics.

Dr. R. Gowans, E.N.T. Specialist, doubted if any speciality had been so profoundly affected by antibiotics and sulpha drugs. He said there were fundamental differences in the E.N.T. field from others, e.g.:—(a) Proneness to repeated attacks in the same place; (b) Sequelae had been the rule; (c) Complications had been always dangerous and serious. He stated that 10-12% of the population suffered from perforation of the drum, but now chronic otitis media was a preventable condition, the treatment very simple. Streptococci, Staphylococci and Pneumococci from the upper respiratory tract should be treated with the appropriate antibiotic in adequate dosage to prevent a 'masking effect'.

Paracentesis of the drum was now probably not necessary and prophesied that in a few years chronic otitis media would be quite preventable. He touched on the serious nature of such complications as sinus thrombosis, meningitis and cerebral abscess and said that in paranasal sinus disease, the results from antibiotics were disappointing, but in acute sinusitis they were helpful though adequate drainage, etc., was still required with instillations of Penicillin to prevent chronicity. He thought Aureomycin, etc. might control sinus infections. *Dr. Gowans* specially mentioned tonsillitis in the young child and that antibiotics in mild infections tended to produce repeated attacks because natural immunity had not developed. He considered uncomplicated upper respiratory infections should be treated as of old to allow natural immunity to develop.

Dr. N. R. Pooler considered the general practitioner's point of view saying that instead of relying on a bed-side manner plus a full range of placebos, the general practitioner was now able to employ really curative drugs. He remarked that the public had a tendency to order their own treatment and in prolonged fever no patient was satisfied until the full range

of antibiotics had been tried and therefore the general practitioner was irresistibly compelled to use them empirically. The speaker said that as far back as 1897 the green mould from cheese was used for certain infections and in 1907 Pyocyanase was used.

These antibiotics (Penicillin) had been used as a weapon of warfare and exploited first by the U.S.A. and then by Great Britain. *Dr. Pooler* thought that the indiscriminate use of Streptomycin in tuberculosis might lead to the wide-spread development of resistant strains and he considered that the sale of these drugs must be controlled as education of the public was quite hopeless.

In the discussion which followed, *Dr. A. D. Cuthbert* enquired whether antibiotics in massive doses in the initial stages would not release large doses of endotoxin.

Dr. F. W. P. Cluver told of one case of severe tick typhus fever with enlarged glands and inguinal buboes which had reacted dramatically to Aureomycin. He said that from the Public Health aspect the development of resistant strains was most important but, fortunately, so far no D.D.T.-resistant mosquitoes had been found although blue ticks were becoming resistant to arsenic.

Dr. J. Drummond congratulated all the speakers on their handling of a big subject in a very condensed way. He said that some Penicillin-resistant organisms manufactured penicillinase and others evolved a different respiratory process. Chloromycetin was excreted inert though chemically unaltered so that the system of the patient did something to Chloromycetin to render it inactive. *Dr. Drummond* said the Aureomycin, Chloromycetin and perhaps Terramycin entered the cell itself; other antibiotics acted extra-cellularly. He thought that the use of Alydase with an antibiotic might aid its penetration of tissue, e.g. washing out sinuses.

Dr. J. Leeming, considering the place of antibiotics in dermatology, said that topical application of Penicillin cream had very little place, but that Chloromycetin cream had most dramatic effects in carefully selected cases, e.g. impetigo and genuine infections, not weeping eczematous conditions with crusting. In secondarily infected fungus infections of the feet he advised systemic Penicillin to kill the infection and then the fungus could be tackled. As many persons were proving allergic to Penicillin, testing by intradermal injection was worth consideration but that desensitization was not worth while.

Dr. N. G. Steere, from the gynaecological standpoint, said that in the pregnant syphilitic woman Penicillin, 4 or 5 million units, would practically ensure a healthy baby and that in ophthalmia neonatorum Penicillin ointment was more effective than drops. Of vulvo-vaginitis in children he said that 3% were not cured by Penicillin, probably because of a mixed infection. Puerperal sepsis had virtually disappeared though cases probably did occur and inadequate dosage of Penicillin might lead to late 'pus' tubes. Penicillin given within 12 hours of rupture of the membranes in prolonged cases had lowered the neo-natal death rate.

Dr. L. Knox remarked on antibiotics as they affected the E.N.T. Surgeon and thought that the development of resistant strains had been over-exaggerated and should not be a reason for withholding these drugs.

Dr. N. H. Walker stated that against antibiotics, especially Penicillin, was the fact that they were only bacteriostatic and he thought that cure should lie in the direction of a bactericidal substance plus natural immunity.

Mr. Stafford May supported Dr. Knox and he recommended the routine Penicillin as a preventive against infection. Regarding the local use of antibiotics in surgical conditions, e.g. the acute abdomen, he stated that whilst most sulphonamides inside the abdomen may cause adhesions, Sulphanilamide did not have this tendency and its use had reduced the necessity for drainage almost to nil.

Dr. E. B. Adams considered that we stood in dire danger in changing from well-tried and proved methods and that diagnosis was the key to treatment and he feared that with a large battery of antibiotics accurate diagnosis might become of secondary consideration.

Dr. J. W. E. Graham related the good results from using Penicillin parenterally in cases of Vincent's angina.

Mr. J. D. Raftery said that in orthopaedic surgery Penicillin had proved a wonder drug in such infections as acute osteomyelitis, but that it would not cure chronic osteomyelitis although acute exacerbations could be controlled. He thought that the 'antibiotic umbrella' was a danger as it tended to some relaxation of rigid aseptic technique. In the past knee cartilage excisions had done quite well without Penicillin. He agreed with *Dr. Knox*.

Dr. Thomas replied to some of the questions and said that the pre-operative use of antibiotics was not contraindicated.

The Chairman acknowledged the debt of thanks which the meeting owed to the opening speakers for their careful selection of subject matter so as not to overlap and for the hard work and considerable thought they had given to its preparation.

Minutes of a Clinical Meeting held in Red Cross House, Durban, on 26 July 1950

Present: *Dr. H. Renton* (President) in the Chair and 95 members and guests attended.

The subject for the evening was *Cardiac Surgery*: *Its Indications and Methods* and the speakers were *Dr. B. van Lingen*, Senior Physician (Tutorial) and *Mr. D. I. Adler*, Thoracic Surgeon to the General Hospital, Johannesburg. The President, in introducing the speakers, extended to them a very cordial welcome on behalf of the Branch.

In reply the speakers expressed their appreciation at being asked to address this Branch. *Mr. Adler* paid particular tribute to *Dr. Macfadyen* under whom he had served as a houseman at King Edward VIII Hospital during 1937.

Dr. van Lingen opened the lecture by saying that as cardiac surgery was such a large subject they would confine their remarks to the consideration of the main four conditions:

1. Patent Ductus Arteriosus.
2. Septal Defects.
3. Coarctation of the Aorta.
4. Fallot's Tetralogy.

Dr. van Lingen dealt with the signs and symptoms, methods of examination, diagnosis and differential diagnosis and *Mr. Adler* considered the indications and contra-indications for operation and briefly outlined the types of operation and their technique. The lecture was profusely illustrated through the epidiascope with diagrams, electrocardiograms, phonocardiograms, and also with drawings and pictures depicting various stages in the operations.

In the differential diagnosis of Fallot's tetralogy, a not uncommon condition, *Dr. van Lingen* made short reference to Eisenmenger's Complex, Taussig's Syndrome, Transposition of the Great Vessels, Truncus Arteriosus, Tricuspid Atresia, Aortic Atresia, Absence of the Aortic Arch, and Complete Transposition of the Great Vessels associated with Aortic Atresia.

Mr. Adler made a strong plea for the setting up in Durban of a Clinic at first for the diagnosis of these conditions and later for the carrying out of the necessary surgical operations. On account of the lateness of the hour there was no discussion. In warmly thanking the speakers, the *President* said that the Meeting was much indebted to them for a brilliant exposition of this subject, and that the audience had listened with rapt attention and had been greatly stimulated in thought.

PASSING EVENTS

Tariff of Fees for Approved Medical Aid Societies

A new Tariff Book of Fees for Approved Medical Aid Societies has been drawn up incorporating the 10% reduction recently agreed to by the Association after consultation by questionnaire with its members. This is effective from 1 July 1950.

Copies have been posted to members of the Association, but extra copies may be obtained on application to the Medical Secretary, P.O. Box 643, Cape Town. Orders should be accompanied by a remittance of 9d.

* * * *

Dr. Maurice Nellen, specialist physician, formerly of Geneva House, Parliament Street, Cape Town, has changed his address to 808 Grand Parade Centre, Adderley Street, Cape Town. Telephone: 3-0274.

* * * *

Congratulations to Dr. and Mrs. Louis Nel of Goodwood, C.P., on the birth of a son on 19 September.

Dr. W. J. Blignault of the National Hospital, Bloemfontein, has been on a recent visit to his parents in Swellendam.

* * * *

Mr. C. A. R. Schulenburg, M.Ch. (Cape Town) F.R.C.S. (Eng.) has been elected Hunterian Professor of the Royal College of Surgeons of England for 1951.

Mr. Schulenburg will deliver his Hunterian Lecture at the College in London in January 1951.

REVIEWS OF BOOKS

SYMPTOMS IN CLINICAL MEDICINE

Major Symptoms in Clinical Medicine. By John Almeyda, M.R.C.P., D.P.H. (Lond.), M.R.C.S. (Eng.) With a foreword by Sir Adolphe Abrahams, *O.B.E.*, M.A., M.D. (Camb.), F.R.C.P. (Lond.). (Pp. 378 + xiii. With 185 illustrations, including 10 in colours and 13 charts. Volume I. 25s.) London: Henry Kimpton.

Contents: Introduction. Section I: Objective Symptoms. Section II: Respiratory Symptoms. Section III: Cardio-Vascular Symptoms. Section IV: Alimentary Tract Symptoms. Section V: Urinary Symptoms. Index.

This book is the first of two volumes on the major symptoms in clinical medicine. Conventionally the medical student in his fourth year of study has available to him books on clinical methods of examination and also textbooks of systematic medicine, in which diseases or groups of diseases are described. Dr. Almeyda approaches the teaching of medicine from a different angle. He takes major symptoms such as oedema, cardiac pain, pigmentation, and discusses each of them in logical order, first defining the symptoms, then giving a résumé of the applied anatomy and physiology; a complete classification of causes is followed by the mechanism and clinical features of diseases that may produce a particular symptom. He then proceeds to show how, by physical examination and some necessary investigations, a synthesis of the known data may be used to arrive at the most likely diagnosis.

Dr. Almeyda's book compiles in handy form a system that is followed by many tutors of medicine at the bed-side, viz. 'the synthetic application of the data collected in the course of clinical examination to enable the physician to proceed from symptoms and signs to the actual disease', and it is surprising that a book on this method of teaching has not appeared hitherto.

The book is pleasingly and lucidly written and produced and most of the illustrations helpful to the text. It can be confidently recommended to students preparing for the final examination, and it should also prove a valuable reference book for tutors in medicine. It therefore deserves the close attention of Departments of Medicine at our Medical Schools.

We look forward keenly to the publication of the second volume.

HAMILTON BAILEY'S EMERGENCY SURGERY

Emergency Surgery, Part III. By Hamilton Bailey, F.R.C.S. (Eng.), F.A.C.S., F.I.C.S., F.R.S.E., assisted by Norman M. Matheson, M.B., Ch.B., M.R.C.P. (Lond.), F.R.C.S. (Eng.), F.A.C.S. (Pp. 389-556. With 247 illustrations, many coloured. 21s. per part. Orders can only be accepted for complete work. Sixth edition, 1950.) Bristol: John Wright & Sons Limited. London: Simpkin Marshall Limited.

Contents: *Part III.* 38. The Rectum and Anus. 39. The Female Generative Organs. 40. Some Emergencies in Obstetric Practice Requiring Surgical Measures. 41. Abdominal Emergencies in the Tropics. 42. Some Post-Operative Complications. 43. Faecal Fistulae. 44. Phlebothrombosis Decubiti. 45. Renal Colic and Acute Renal Infections. 46. Injuries to the Kidney and Ureter. 47. Oliguria, Anuria, and Uraemia. 48. Emergency Operations Upon the Kidney. 49. The Bladder 50. The Bladder (continued). 51. The Prostate and Seminal Vesicles. 52. The Urethra. 53. The Penis. 54. The Testes and Scrotum.

Of the many books from the pen of Hamilton Bailey, *Emergency Surgery* is one of the best known, and there can be few of the younger surgeons who, at one time or another, have not had cause to be grateful to the author of this most practical work. In Part III of the sixth edition, the illustrations are outstanding and without equal.

The section on the rectum is full of useful advice, especially regarding the treatment of the complications of haemorrhoids. There is no better description of the surgical treatment of ruptured ectopic than that given in chapter 39, and caesarian section is also described in detail. The section on faecal fistula aims at combating the effects rather than removing the cause and as such is not the treatment of first choice. The procedure recommended for phlebothrombosis is conservative and practical.

The chapters on the urogenital system are in great detail and bespeak Mr. Bailey's wide urological experience. Worth special mention are the portions dealing with retention of urine and nephrectomy as an emergency operation; although the position and incision recommended for the latter are not those most commonly used. In the section on renal colic and infections, ureteric catheterization is freely recommended for pyelitis and not enough emphasis laid on the clinical differention and the use of blood counts and straight X-rays. Instrumention is not without risk as is forcibly stated in a later section on cystitis.

This book is written to guide resident surgical officers and practitioners through the early days when they are completely on their own and in this field it is unequalled and a sheer necessity.

CLINICAL PATHOLOGY

Clinical Pathology: Application and Interpretation. By Benjamin B. Wells, M.D., Ph.D. (Pp. 397, with 32 figures. 51s.) Philadelphia and London: W. B. Saunders Company. 1950.

Contents: 1. Infectious Diseases. 2. Diseases of the Gastrointestinal System. 3. Diseases of the Respiratory System. 4. Diseases of the Kidney and Urinary Tract. 5. Diseases of the Blood. 6. Diseases of the Cardio-vascular System. 7. Metabolic and Endocrine Disorders. 8. Clinical Laboratory Studies in Surgery. 9. Clinical Laboratory Studies in Obstetrics. Appendix. Index.

To-day the clinical laboratory has a very important part to play in medical practice. There is an abundance of books which provide the specialized knowledge required by the clinician and pathologist, written usually fairly rigidly from one side of the subject. This book by Professor Wells aims to bridge the gap between such books, and it can be fairly said that he has achieved his objective.

The clinician especially will find it useful because, starting with the clinical picture, the road to be followed is outlined and the tests which seem most likely to throw accurate light upon the subject are spaced rationally along it so that one goes from house to house, as it were, until finally the correct answer is found.

The pathologist will like it too, but will probably find criticism easier, although never will such criticism refer to anything but minor points. Why, for example, does the author refer to *Cl. welchii* in Table 12 and *Cl. perfringens* in Table 11? Such substitution of names for the same organism is likely to cause confusion, especially to the clinician, and as *Cl. welchii* is the more familiar name it would seem reasonable to retain it in both tables.

Likewise the statement on page 46 that no positive evidence of staphylococcic food poisoning can be obtained by examination of the faeces is not true, because the organism can be found if the appropriate technique is employed and its relationship to an outbreak established with the aid of bacteriophage typing.

Nevertheless, these are minor criticisms, and the book should find a place on the bookshelf of the discriminating clinician and pathologist.

CORRESPONDENCE

RURAL NATIVE PRACTICE

To the Editor: At least three-quarters of my practice consists of babies—Native babies hustled to me at the first sign of 'wind' or constipation—(Most native mothers use a small enema syringe, which they buy from local Native stores), when the daily stool is not forthcoming—or left until they are almost moribund and it is evident that the witch doctor's exorbitant 'cures' have had no effect.

Native children's ailments are at least as varied as those of Europeans and as patients they are a good deal easier to

examine. The taking of the temperature is the most troublesome part of the whole examination, as in these naked babies taking the rectal temperature is the only method which can be relied on.

I have always been thankful for a thorough drilling in ear examinations. This was acquired in an East End Children's Hospital before the days of penicillin when the myringotomy knife was, to my mind, all too frequently used. I always disliked this procedure, which is certainly not without its hazards.

But to return to Native babies in the Transkei. There is no difference in the incidence of tonsillitis and otitis media between Native and European babies. Quite early on in my practice one particular case perturbed me considerably. A Native woman brought in her baby of 18 months grunting with pain. She said it was the baby's 'stomach'. Temperature, 102.6° F., with the baby in great distress grunting with each breath. A complete physical examination was negative apart from one ear. The whole drum was injected and at the junction of the drum and middle meatus was a small translucent bleb which I had never encountered in any infant ear before.

I put the baby in my small improvised hospital which consists of a single Native hut which is supposed to hold two patients but often holds four. I gave him penicillin and diazine but after two days there was no improvement either in temperature or discomfort. The ear remained the same. The mother's insistence that it was the baby's 'stomach' grew, as by the third day the baby had not passed a motion. I took them up to the district nurse's clinic where an enema gave a record result. The baby seemed instantaneously relieved and happy and the mother forthwith bundled up their belongings and betook herself and her baby to her home 12 miles away.

Two days later the farmer telephoned to say that the baby was as bad as ever and would I please call there and see.

The hut of this mother and her four children was a hovel. I had to bend double to go through the doorway and could not stand upright inside. The young farmer said apologetically that these particular huts had been built in his father's day and were soon to be burnt down, pending completion of decent living quarters for his Natives. So the old order passes (I hope!).

The baby was as distressed and feverish as before. But in place of the translucent bleb which had mystified me so previously, was the shiny little body of a small tick with its minute white legs. I was so excited that I nearly dropped the auriscope. Those huts were burnt down that same evening. Since then I have not missed tick-bite fever again. Since then, too, I have encountered many innocuous foreign bodies in babies' ears, consisting chiefly of insect's legs and insect's wings. The mother's usual complaint is that the 'animals' crawl up the nose and come out of the ears: 'Will the doctor please give something for the nose as well as the ears?'

I have always been under the impression that otitis is associated with great pain. There is the case of the agitated parents whose little girl had started screaming at the breakfast table, doubling herself up. They were convinced that she had swallowed a foreign body. It was a case of early otitis media.

My own little girl of three years has twice had otitis. On both occasions she assured me that she was 'siekie en moegie maar nie eina nie'. Perhaps it is that I detect my children's listlessness and feverishness early on, or more likely that she is by now very wary of the syringe containing procaine penicillin. On the last occasion she said very bitterly to her grandmother: 'She poked me in the "bout".'

'Odie.'

Cedarville.
1 September 1950.

THE E.C.G., THE G.P. AND THE SPECIALIST

To the Editor: I object to 'Physician's' statement in the *Journal* of 2 September 1950, viz. that the E.C.G. 'is essentially a machine to be used by a specialist'. How many specialists can interpret an E.C.G. with all its unipolar chest and limb leads? I certainly have found none in the town in which I am practising. Electrocardiography is a science to be practised by those who know and have studied it and therefore there should be no distinction between the fee charged by a general practitioner and a specialist. However, I agree that the fee is ridiculous.

A modern machine costs, to-day, £375. The amount of paper used in a detailed electrocardiogram costs about 7s. 6d., leaving a gross profit of 12s. for the use of the machine and interpretation.

For an intravenous injection (exclusive of the cost of material) the fee 'allowed' is 13s. 6d. Quite ridiculous!

General Practitioner, M.R.C.P.

4 September 1950.

FEE FOR ELECTROCARDIOGRAM

To the Editor: The fee accruing to a physician when a member of a Medical Aid Society is referred to him for a consultation involving an ECG is £3 3s. plus £1 10s. less 10% for a temporary period of one year. This fee of £4 4s. is a preferential fee based on the assumption that the private fee for such a consultation is in the neighbourhood of £6 6s. in all. Incidentally, to earn £4 4s., a general practitioner has to pay eight visits.

No individual is responsible for the fixing or adjusting of fees. The Committee responsible for the change did have the advice of a physician who has 'the skill and knowledge needed in the interpretation of the modern ECG'.

C. A. H. Green,
Chairman, Central Commitee for Contract Practice.

Medical House,
5 Esselen Street,
Johannesburg.
5 September 1950.

SPINAL INJURIES AND SPORTS

To the Editor: Every season, there occur one or more cases of fracture or dislocation of the cervical spine with cord damage due to injuries sustained at games. All the surgeon can do when confronted with one of these tragic cases, the most serious of all sporting injuries, is to reduce any deformity present and prevent its recurrence. He is powerless to prevent the usual, and often fatal, pulmonary complications which supervene within 48 hours. If the patient survives, he is often hopelessly paralysed. There is little we can do to help.

In this area, the patient is usually brought to hospital by motor-car from the scene of the accident. Nearly every summer, some bather is so injured by diving and landing head first on to submerged rocks. Rugby football is responsible for another group of cases. Here, it would appear that after the collapse of a scrum, the players pick themselves up and one of them is found unable to rise. Another cause seems to be the flying or dive tackle. These are merely my impressions and I am far from certain what actually happens on the field of play. It would be useful to know whether the injury occurs during the collapse of a set or a loose scrum and whether it could be caused in a regularly well-packed scrum. I am far from satisfied that the deformity is caused in the way the textbooks describe. At autopsy it would appear that a shearing and/or torsion force is as necessary as a compression and a flexing one.

I would like to suggest that the University Medical Schools, which are also the centres of rugby football, undertake a long-term investigation into the causation and frequency of this class of injury. In the event of certain playing tactics being found responsible, the referees and coaches should make every endeavour to discourage these practices. It may be possible thereby to prevent this injury without any necessity for introducing further legislation into a game which I am informed is already overburdened with cumbersome and complicated rules.

E. Colley.

Southern Life Building,
Main Street,
Port Elizabeth.
6 September 1950.